
healthchek
SM

Keys to being healthy!

- 🗝 **Get a Healthchek yearly.**
- 🗝 Eat a healthy diet.
- 🗝 Exercise regularly.
- 🗝 Get enough sleep.
- 🗝 Avoid tobacco and alcohol.
- 🗝 Avoid stress.

Healthchek offers the *ABC*'s of health.

Affordable

Beneficial

Convenient

☑ You may have an illness slowly working, if caught early it may be curable or manageable.

☑ Prolong your life & avoid premature death and disability by using the keys to being healthy.

☑ Keep medical documentation for all of your Healthchek screenings and share them with your doctor.

☑ Know your family medical history and the early warning signs of disease.

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Congratulations on being proactive with your health!

Your smart choices may benefit you now and later in life.
We thank you for participating in a Healthchek screening event.
We wish you a long, healthy and happy life.

At Healthchek, we believe in offering health and wellness screenings while giving quality service without charging the customer the ever-increasing cost of medical expenses.

Healthchek specializes in on-site collection. We offer wellness screenings in our office or at an on-site location near you. Please visit our website and check the calendar page for times and locations.

We concentrate on meeting our client's needs by customizing our services toward them. If you are interested in scheduling a screening event for your company, church, etc… please contact us.

OUR MISSION:

To bring convenient, quality, professional service
at an affordable price while promoting pro-active wellness.

Early Detection & Prevention
Are the Keys to Longevity and Quality of Life.

Our Services

- ✓ **Lab Work**
- ✓ **Insurance Physicals**
- ✓ **DOT Physicals**
- ✓ **Drug Testing**
- ✓ **DNA Paternity Testing**
- ✓ **Hair Mineral Analysis**
- ✓ **Flu Shots**
- ✓ **EKG's**
- ✓ **Pulmonary Function/Fit**
- ✓ **Blood Pressure**

Lipid Panel

Cholesterol is a fat-like substance in the blood which, if elevated has been associated with heart disease. A total cholesterol test measures the total amount of a fatlike substance in the blood. Lipoprotein analysis *(lipid panel)* measures blood levels of total cholesterol, LDL cholesterol, HDL cholesterol, and triglycerides.

The body uses cholesterol to help build cells and produce certain hormones. When there is too much cholesterol in the blood, it and other substances may begin to build up along the inside of the artery walls, forming what is known as plaque. This plaque build-up is called "hardening of the arteries" or atherosclerosis. A large deposit of plaque may obstruct the flow of blood through the artery, affecting blood flow to the heart, brain, or other vital organs. If unstable plaque tears open, it may trigger the formation of a blood clot in the artery, which can result in a heart attack or stroke.

There are two main sources of cholesterol, dietary intake and liver production. Dietary cholesterol comes from the foods you eat such as meat, poultry, eggs and dairy products. Your liver will produce up to 80% of what your body needs.

Triglycerides- Triglycerides are a type of fat the body uses to store energy. Triglycerides have been proven useful in diagnosis and treatment of diabetes, kidney, liver obstruction, Lipid metabolism and many endocrine disorders. Levels help to assess risk of coronary heart disease.

Total Cholesterol- Total cholesterol is useful in diagnosis of hyperlipidemias, atherosclerosis, hepatic and thyroid diseases. Total cholesterol, HDL and triglycerides provide information on risk of Coronary Disease.

HDL Cholesterol- High Density Lipoprotein is known as the "GOOD" Cholesterol and the higher the levels the better. HDL cholesterol helps remove LDL cholesterol from the body by binding with it in the bloodstream and carrying it back to the liver for disposal. HDL is a useful indicator of risk of coronary disease as low levels are associated with heart disease, obesity, stress, smoking and diabetes mellitus.

LDL Cholesterol- Low Density Lipoprotein is known as the "BAD" cholesterol. LDL cholesterol collects inside the walls of the arteries and often contributes to the formation of plaque. An LDL level of less than 130 is recommended, values greater than 160 are considered high risk and should be followed up by your physician. LDL is a key factor in determining atherosclerosis and coronary artery disease. The higher the level of LDL equals the greater the risk of a heart attack or stroke.

Cholesterol/HDL Ratio- A ratio obtained by dividing the cholesterol total by the HDL. If the cholesterol/HDL ratio is high, there is a greater risk of coronary heart disease; the lower the ratio, the lower the risk for coronary heart disease.

Comprehensive Metabolic Panel

Glucose- Glucose is a type of sugar, found in many foods. Glucose levels are controlled by insulin and glucagon. In the fasting state, glucose levels are low, then glucagon causes glucose levels to rise. After eating, glucose levels are elevated, then insulin is secreted driving the glucose into the cells to be metabolized to glycogen, amino acids, and fatty acids. High glucose elevations may indicate diabetes mellitus. Low glucose elevations may indicate hypoglycemia.

Urea Nitrogen (BUN)- A blood urea nitrogen test measures the amount of nitrogen in your blood that comes from the waste product urea. Urea is formed when protein is broken down in your body. It is produced in the liver and eliminated from your body in urine. A BUN test is done to estimate how well your kidneys are functioning. If your kidneys are not able to remove urea from the blood normally, your BUN level increases. Heart failure, dehydration, or a diet high in protein can also increase your BUN level. Liver disease or damage can decrease your BUN level, because urea is made in the liver. A decreased BUN level can occur normally in the second or third trimester of pregnancy.

Creatinine- Creatinine measures the level of the waste product creatinine in your blood and urine. This test provides information about how well your kidneys are working. Creatine is a substance that forms when food is converted into energy through a process called metabolism. Creatine is broken down into another substance called creatinine, which is filtered out of your blood by the kidneys and then passed out of your body in urine. A high creatinine level may mean your kidneys are not working properly. The amount of creatinine in the blood depends partly on the amount of muscle tissue; therefore, men generally have higher creatinine levels than women.

BUN/Creatinine Ratio- The level of creatinine in your blood also provides information on how well your kidneys are working; a high creatinine level may mean your kidneys are not working properly. The measured blood urea nitrogen (BUN) and creatinine tests can be used to calculate the BUN-to-creatinine ratio. A BUN-to-creatinine ratio can help your health professional predict which conditions, such as dehydration, may be causing abnormal BUN and creatinine levels and decreased kidney function.

Calcium- A test for calcium in the blood measures the calcium level in the body that is not stored in the bones. Calcium is the most plentiful mineral in the body and one of the most important. The body needs it to build and repair bones and teeth, help nerves function, make muscles contract, clot blood, and allow proper function of the heart. Almost all of the calcium in the body is stored in bone. The rest is found in the blood. Under normal conditions, the level of calcium in the blood is carefully controlled. When blood calcium levels fall, calcium is released from bones to restore proper blood levels. When blood calcium levels rise, the excess calcium may be stored in bone or passed out of the body in urine and stool.

Comprehensive Metabolic Panel (cont.)

Electrolytes are your potassium, sodium, chloride, and CO2 levels.

Potassium- A potassium test measures the amount of potassium (an electrolyte and mineral) in the blood. Potassium is needed for proper nerve and muscle (including heart) function. It helps regulate the water balance (the amount of fluid inside and surrounding the cells) and electrolyte balance of the body. Potassium levels can be affected by kidney function, blood pH, the amount of potassium in the diet, hormone levels in the body, excessive vomiting, and taking certain medications (including potassium supplements). A balanced diet generally contains enough potassium for the body's needs. Potassium is released into the urine by the kidneys, even when the blood potassium level is low and can cause a blood potassium deficiency if the body is unable to control potassium levels. Abnormal potassium levels may cause symptoms such as muscle cramps or weakness, nausea, diarrhea, frequent urination, dehydration, low blood pressure, confusion, irritability, paralysis, and changes in heart rhythm.

Chloride- A chloride test measures the level of chloride in your body. Chloride is one of the most important electrolytes in the blood. Chloride helps keep the amount of fluid inside and outside of your cells in balance. It also helps maintain proper blood volume, blood pressure, and pH of your body fluids. Most of the chloride in your body comes from table salt in the diet. Chloride is absorbed by the intestines during food digestion. Any excess chloride is passed out of your body through the urine. Chloride levels in your blood generally rise and fall along with sodium levels in your blood.

Carbon Dioxide- A carbon dioxide test measures the total amount of the three forms of carbon dioxide (bicarbonate, carbonic acid, and dissolved carbon dioxide) in your blood. This test is also called a total carbon dioxide test. Carbon dioxide is a gaseous waste product made from metabolism. The blood carries carbon dioxide to your lungs, where it is exhaled. More than 90% of carbon dioxide in your blood exists in the form of bicarbonate. The remainder of the carbon dioxide is either dissolved carbon dioxide gas or carbonic acid. Your kidneys and lungs regulate the levels of carbon dioxide, bicarbonate, and carbonic acid in the blood.

Sodium- A sodium test measures the amount of sodium (an electrolyte and a mineral) in the body. Sodium helps regulate the water balance (the amount of fluid inside and surrounding the cells) and electrolyte balance of the body. Sodium also plays an important role in nerve and muscle functions. It carries an electrical charge when it is dissolved in blood. Almost all foods contain sodium as with some medicines, aspirin, mouthwash, and toothpaste. Too much sodium in the diet may raise blood pressure in some people and increase their risk of heart disease, stroke, and kidney damage. High sodium intake can also increase the amount of water retained by the body, leading to swelling of the legs and hands.

Comprehensive Metabolic Panel (cont.)

Total Protein- Blood serum contains large amounts of protein. This test is useful in diagnosing liver, kidney, and bone marrow, metabolic and nutritional disorders. Two major groups of proteins in blood serum are albumin and globulin. A total serum protein test measures the total amount of protein in blood serum as well as the amounts of albumin and globulin. The amounts of albumin and globulin can help a doctor diagnose certain diseases.

Albumin- Albumin is produced mainly in the liver. It helps keep the blood from leaking out of blood vessels. When albumin levels drop, fluid may collect in the ankles, lungs, or abdomen. Albumin also helps carry some medications and other substances through the blood and is important for tissue growth and healing.

Globulin- Globulin is made up of different proteins that can be separated into alpha, beta, and gamma types. Some globulins are formed by the liver while others are formed by the immune system. Certain globulins bind with hemoglobin. Other globulins transport metals, such as iron, in the blood and help fight infection.

Total Bilirubin- A Bilirubin test measures the amount of Bilirubin in a blood sample. Bilirubin is a brownish yellow substance found in bile. It is produced when the liver breaks down old red blood cells. Bilirubin is then removed from the body through the stool and gives stool its normal brown color. The most obvious symptom of high Bilirubin levels is jaundice, a condition in which the skin and whites of the eyes appear yellow. The Bilirubin test is mainly used to evaluate liver function and monitor the development of liver disease, such as hepatitis or cirrhosis, or the effects of medications that can damage the liver.

Comprehensive Metabolic Panel (cont.)

AST, ALT, GGT, and Alkaline Phosphatase are abbreviations for proteins called enzymes which help all the chemical activities within cells to take place. Injury to cells release these enzymes into the blood. They are found in muscles, the liver and heart. Damage from alcohol and a number of diseases are reflected in high values. AST and ALT are also liver and muscle enzymes. They may be elevated from liver problems, hepatitis, excess alcohol ingestion, muscle injury and recent heart attack.

AST- Aspartate aminotransferase (AST) is an enzyme found in red blood cells, liver and heart cells, and muscle tissue. It also is found in other organs, such as the pancreas and kidneys. AST formerly was called serum glutamic oxaloacetic transaminase (SGOT). When body tissue or an organ such as the heart or liver is diseased or damaged, additional AST is released into the bloodstream. The amount of AST in the blood is directly related to the extent of the tissue damage. After severe damage, AST levels in 6-10 hours and remain high for about 4 days. An AST test is done to help diagnose liver disease, and monitor treatment for liver disease.

ALT- An alanine aminotransferase (ALT) test is a blood test that measures the level of alanine aminotransferase enzyme found mainly in the liver, but also in smaller amounts in the kidneys, heart, muscles, and pancreas. ALT was formerly called serum glutamic pyruvic transaminase (SGPT). ALT is measured to determine whether the liver is damaged or diseased. Low levels of ALT are normally found in the blood. However, when the liver is damaged or diseased, it releases ALT into the bloodstream, causing levels of the enzyme to rise. Although ALT is found in organs other than the liver, most increases in ALT levels are due to liver damage.

GGT- Gamma-glutamyl transferase (GGT) participates in the transfer of amino acids and peptides across the cellular membrane and possibly participates in glutathione metabolism. Highest concentrations of this enzyme are found in the liver. This test is used to detect liver cell dysfunction. GGT is also elevated in liver disease, particularly with obstruction of bile ducts. Unlike the alkaline Phosphatase it is not elevated with bone growth or damage. Certain drugs and alcohol may cause increased GGT levels.

Alkaline Phosphatase- An alkaline phosphatase (ALP) test measures the amount of the enzyme ALP in the blood. ALP is produced primarily in the liver and in bone. It also is produced by the placenta of a pregnant woman and, to a lesser extent, by the intestines and kidneys. Normally the liver produces more ALP than the other organs or the bones. Some conditions can release large amounts of ALP into the bloodstream. These conditions include rapid bone growth, bone disease, or damaged liver cells. ALP is used to diagnose liver disease or evaluate the liver when medications are taken that can damage the liver. ALP is also used to evaluate bone abnormalities and the cause of a high blood calcium level.

Complete Blood Count

A complete blood count (CBC) provides important information about the kinds and numbers of cells in the blood, especially red blood cells, white blood cells, and platelets. A CBC helps evaluate symptoms (such as weakness, fatigue, or bruising) and diagnose conditions (such as anemia, infection, and many other disorders).

White Blood Cell Count- White blood cells protect the body against infection. If an infection develops, white blood cells attack and destroy the bacteria, virus, or other organism causing it. White blood cells are bigger than red blood cells and normally fewer in number. When a person has a bacterial infection, the number of white cells can increase dramatically.

Red Blood Cell Count- Red blood cells carry oxygen from the lungs to the rest of the body. They also carry carbon dioxide back to the lungs so it can be exhaled. If the red blood cell count is low (anemia), the body may not be getting the oxygen it needs. If the count is too high (a condition called polycythemia vera), there is a risk that the red blood cells will clump together and block tiny blood vessels.

Hemoglobin- Hemoglobin is the major substance in red blood cells. It carries oxygen and gives the blood cell its red color. The hemoglobin test measures the amount of hemoglobin in the blood and is a good indication of the blood's ability to carry oxygen throughout the body.

Hematocrit- This test measures the amount of space red blood cells occupy in the blood. The value is given as a percentage of red blood cells in a volume of blood. For example, a hematocrit of 38 means that 38% of the blood's volume is composed of red cells.

MCV- Mean corpuscular volume.

MCH- Mean corpuscular hemoglobin.

MCHC- Mean corpuscular hemoglobin concentration.

RDW- Red cell diameter width.

Platelet Count- Platelets are the smallest type of blood cell. They play a major role in blood clotting. When bleeding occurs, the platelets swell, clump together, and form a sticky plug that helps stop the bleeding. If there are too few platelets, uncontrolled bleeding may be a problem. If there are too many platelets, there is a risk of a blood clot forming in a blood vessel. Also, platelets may be involved in hardening of the arteries.

Complete Blood Count (cont.)

Neutrophils- Neutrophils are the most common type of white blood cell and are produced in 7 to 14 days and exist in the circulation for only 6 hours. Their primary function is to kill and digest bacterial microorganisms.

Lymphocytes- Lymphocytes are primarily involved with cellular-type immune reactions and antibody production. They primarily function to fight chronic bacterial infection and acute viral infections.

Monocytes- Monocytes are capable of fighting bacteria in a way very similar to that of neutrophils. However, monocytes can be produced more rapidly and can spend a longer time in the circulation than neutrophils.

Eosinophils and Basophils- Eosinophils as well as basophils are involved in the allergic reaction. Parasitic also are capable of stimulating the production of these cells. Eosinophils and basophils do not respond to bacterial or viral infections.

Colon Cancer

Fecal Occult Blood Test (FOBT) This test examines a smear sample of your stool for hidden blood, a sign of possible colorectal cancer. The test is taken in the privacy of your own home, and mailed back to us for testing. **The National Colorectal Cancer Research Alliance states this test should be done at least once a year.**

Colorectal cancer is the second leading cause of cancer deaths in the United States. There were an estimated 130,200 new cases of colorectal cancer diagnosed in 2000. Women are as likely as men to die from colorectal cancer. **Colorectal cancer is over 90% curable if found early**, while about 8% of cases in an advanced stage are cured. More than 33% of colorectal cancer deaths could be avoided if people over 50 had regular screenings.

Symptoms of colorectal cancer include blood in the stool or rectal bleeding, abdominal pain, weight loss, persistent change in bowel habits, and tiredness or anemia. A family history of colorectal cancer or polyps may increase your risk. Smoking and alcohol consumption may also increase your risk of colorectal and other cancers, as well as heart disease. A healthy diet and regular exercise may reduce your risk of colorectal cancer.

Separate Tests

Iron- An iron test measures the amount of iron in the blood to evaluate iron metabolism in the body. The values for serum iron are used mainly to determine whether a low amount of iron is due to iron-deficiency (anemia) or another condition, or whether a high amount of iron is due to Hemochromatosis or another condition. Conditions that affect iron include: hemolytic anemia (causes a decrease in the amount of hemoglobin found in red blood cells), Thalassemia (an inherited blood disorder that interferes with the body's normal production of hemoglobin), cirrhosis (a condition that occurs when inflammation and scarring damage the liver), lead poisoning (exposure to lead), rheumatoid arthritis, bleeding, kidney failure, and infection.

Uric Acid- The blood uric acid test measures the level of the uric acid in a blood sample. Uric acid is also produced by the breakdown of the body's cells. Most of the uric acid is eliminated from the body in urine; the rest passes out of the body in stool. However, if excess uric acid is being produced or if the kidneys are not able to remove it from the blood normally, the level of uric acid in the blood increases. High levels of uric acid in the blood can cause the excess uric acid to be deposited in the body's joints, leading to a painful arthritis condition called gout. If gout remains untreated for several years, uric acid crystals can build up in the joints and surrounding connective tissues, forming hard deposits called tophi. High levels of uric acid may also lead to kidney failure or result in the formation of uric acid kidney stones.

Magnesium- A magnesium test measures the level of magnesium in the blood. Magnesium is an important electrolyte needed for proper muscle, nerve, and enzyme function. It also helps regulate energy production in cells and is needed to move other electrolytes (potassium and sodium) into and out of cells. Magnesium is one of the most abundant minerals in the body and is found mainly inside the bones and cells. Only a tiny amount of magnesium is normally present in the blood. It is absorbed through the small intestine during food digestion. Although rare, magnesium deficiency is often caused by conditions that interfere with the ability of the intestines to absorb magnesium from food, by poor diet, or by losing magnesium from prolonged vomiting or diarrhea. People who have diabetes and those who drink excessive amounts of alcohol, overuse diuretics, or have burns over a large area of their bodies are at high risk for developing a magnesium deficiency.

Urinalysis- A urine test measures several different components of urine, a waste product made by the kidneys. A routine screening test may be done to help find the cause for many types of symptoms. The test can provide information about your overall health and clues to many conditions. The kidneys remove waste material, minerals, fluids, and other substances from the blood for elimination in the urine. Therefore, urine can contain hundreds of different bodily waste products. Many factors, such as diet, fluid intake, exercise, and kidney function, affect what is in your urine. A routine urinalysis may check the urine for color, clarity, odor, specific gravity, pH, protein, glucose, nitrites, leukocyte esterase, ketones, microscopic analysis, red or white blood cells, casts, crystals, and the presence of bacteria, yeast cells, or parasites. A urinalysis is usually done as part of a routine physical examination or to screen for a disease or infection of the urinary tract.

C-Reactive Protein

This blood test measures the amount of C-reactive protein (CRP) produced by your liver when you have inflammation somewhere in your body. Higher-than-normal levels of CRP may indicate inflammation or a bacterial infection, such as rheumatic fever. CRP levels do not always change with a viral infection. However, a CRP test cannot indicate where the inflammation is located or what is causing it.

A CRP test is most commonly done to monitor the activity of a range of inflammatory conditions. Some of these conditions are polymyalgia rheumatica, inflammatory bowel disease, temporal arteritis, and rheumatoid arthritis. This test can also be used to monitor your response to cancer treatment. It may be used to monitor your risk for infection after a major surgery. CRP levels normally rise within 2 to 6 hours of surgery and then decrease by the third day after surgery. If CRP levels stay elevated 3 days after surgery, an infection may be present.

A special type of CRP test, the **H**igh-**s**ensitivity **CRP** test (**Cardio CRP**), may be done to evaluate your risk for having a sudden heart problem, such as a heart attack. The cardio CRP is a new test that measures very low amounts of CRP in the blood. This test may be helpful in predicting your risk for heart problems, especially when it is combined with total cholesterol and HDL cholesterol tests.

Hs-CRP	
Less than 1.0 mg/L	Lowest risk
1.0 to 3.0 mg/L	Average risk
Greater than 3.0 mg/L	Highest risk

"We now know that it is not just cholesterol that drives the plaque buildup in the arteries. It is also C-reactive protein, " Dr. Steve Nissen Cleveland Clinic A cardiovascular researcher who led one of the two recent studies.

"We believe we can save thousands of lives immediately simply by making physicians understand that they need to monitor CRP levels in the same manner that they now monitor cholesterol levels, " Dr. Paul M. Ridker Jan 6, 2005 issue of New England Journal of Medicine.

Hemoglobin A1c (Glycohemoglobin)

This test is done to help diagnose and monitor treatment of diabetes. Glycohemoglobin is a blood test that measures the amount of sugar (glucose) bound to hemoglobin. Normally, only a small percentage of hemoglobin in the blood (4% to 6%) has glucose bound to it. However, people with diabetes (or other conditions that increase their blood glucose levels) have more glycohemoglobin than normal.

Most health professionals consider the glycohemoglobin A1c level the most effective way to monitor the control of diabetes. Information gained from a glycohemoglobin test can help determine whether your diabetes medication needs to be adjusted. Test results help monitor the long-term control of blood glucose levels in people with diabetes. Glucose tests measure the level of blood glucose only at that moment. However, blood glucose levels vary throughout the day, depending upon diet, exercise, and the level of insulin in the blood. It is useful to get information about the long-term control of blood sugar levels. The glycohemoglobin test requires only one blood sample every 3 to 4 months, and the test is not affected by recent changes in diet, exercise, or medications. Glucose is bound to hemoglobin in red blood cells at a steady rate.

Since red blood cells last 3 to 4 months, the glycohemoglobin level indicates a person's average blood glucose level in the 2 to 3 months before the test. A glycohemoglobin test indicates how well your diabetes has been controlled in the 2 to 3 months before the test. It can also help your health professional estimate your risk of developing complications from diabetes, such as kidney failure, vision problems, and leg or foot numbness. The A1c level is directly related to complications from diabetes: The lower your A1c level, the lower your risk for complications.

Diabetes Mellitus Adult Onset (Type II)- Diabetes is a disorder of metabolism. Most of the food we eat is broken down into glucose. After digestion, glucose passes into the bloodstream, where it is used by cells for growth and energy. For glucose to get into cells, insulin must be present. Type II Diabetes is due to defects in insulin secretion. About 8 million people in the United States have Type II Diabetes that is not diagnosed. Left untreated, significant damage to vital organs like the eyes, kidneys, heart, brain and many others may occur. Identification of the disease is critical in early treatment and prevention of complications. Blood testing is the most reliable way to diagnose Type II Diabetes.

Common Symptoms:

- ☑ Fatigue
- ☑ Weakness
- ☑ Slow Healing of Wounds or Sores
- ☑ Frequent Thirst
- ☑ Frequent Urination
- ☑ Increased Susceptibility to Infection

Risk Factors:

- ☑ Family History
- ☑ Over 40 Years Old
- ☑ Gestational Diabetes
- ☑ If 20% Over Ideal Body Weight

Native Americans, African Americans, Hispanic

Homocysteine, pronounced (homo-SIS-teen)

Homocysteine is an amino acid normally found in small amounts in the blood. However, high levels of homocysteine in the blood may promote plaque buildup in blood vessels that may, over time, lead to serious cardiovascular problems.

High levels of homocysteine in the blood may increase your risk of atherosclerosis and subsequent coronary artery disease. Elevated homocysteine levels may also damage the lining of blood vessels, which may lead to the formation of blood clots; these, in turn, may increase your risk of stroke, heart attack (myocardial infarction), and pulmonary embolism. Also, increased homocysteine levels may promote the formation of blood clots in the deep veins of the legs (called deep venous thrombosis, or DVT).

Blood levels of homocysteine may increase if your diet does not provide an adequate amount of B vitamins, such as folic acid, vitamin B6, and vitamin B12. You can lower high levels of homocysteine in the blood by increasing your dietary intake of these B vitamins. For example, adequate intake of grain products enriched with folic acid has helped lower Homocysteine levels in some people. However, the exact amount of B vitamins needed to prevent high homocysteine levels in the blood is not known.

In addition to dietary deficiency of B vitamins, other factors may increase your blood homocysteine levels. Family history of elevated blood homocysteine is a major factor. Levels usually rise with age and are usually higher in men than in women. Kidney disease and medication use may also cause your blood homocysteine levels to increase.

- ☑ Smoking tends to elevate homocysteine levels.
- ☑ Oral contraceptives can alter the metabolism of homocysteine
- ☑ Medications such as Tegretol and Dilantin can show increased levels.

PSA

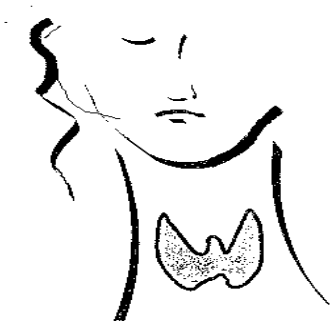
A prostate-specific antigen (PSA) test measures the amount of prostate-specific antigen in the blood. PSA is released into a man's blood by his prostate gland. Healthy men have low amounts of PSA in the blood. The amount of PSA in the blood normally increases as a man's prostate enlarges with age. PSA may increase as a result of an injury, a digital rectal exam, sexual activity, inflammation of the prostate gland (prostatitis) or prostate cancer.

Prostate cancer often grows very slowly, without causing major problems. Detecting prostate cancer early and treating it may prevent some health problems and reduce the risk of dying from the cancer. However, some treatments for prostate cancer can cause other problems, such as controlling urination (incontinence) or erection problems (erectile dysfunction).

The PSA test is used to monitor prostate cancer and how it responds to treatment. If PSA levels increase, the cancer may be growing or spreading. PSA is usually not present in a man who has had his prostate gland removed. A PSA level that rises after prostate removal may mean the cancer has returned or has spread. A PSA may also determine if cancer may be present when other tests, such as a digital rectal exam, are not normal. A PSA test does not diagnose cancer, but it can be used along with other tests to determine if cancer is present.

Check men for prostate cancer. If a PSA test is used for screening, it is usually done for men older than age 50 or for those at high risk for prostate cancer, such as men with a family history of prostate cancer, or for African-American men who have a higher chance of developing cancer than other men. Since other common medical conditions, such as prostatitis, can cause high PSA levels, a prostate biopsy is needed to confirm a diagnosis of cancer.

Thyroid



The thyroid is a butterfly-shaped gland that lies in front of your windpipe (trachea), just below your voice box (larynx). Every cell in your body is affected by the thyroid gland. The thyroid gland uses iodine from food to make two thyroid hormones, thyroxine (T4) and triiodothyronine (T3). The thyroid gland stores these thyroid hormones and releases them as they are needed. The thyroid hormones are carried by the bloodstream to every cell in your body. Within these cells, this hormone controls your metabolism – the rate at which your body produces energy from nutrients.

A thyroid-stimulating hormone (TSH) blood test is used to detect problems affecting the thyroid gland. TSH is produced when the hypothalamus releases a substance called thyrotropin-releasing hormone (TRH). TRH then triggers the pituitary gland to release TSH. TSH causes the thyroid gland to produce the two hormones: triiodothyronine (T3) and thyroxine (T4). T3 and T4 help control your body's metabolism.

A thyroid-stimulating hormone can determine whether the thyroid gland is functioning properly. An under active thyroid gland (hypothyroidism) can cause symptoms such as weight gain, tiredness, dry skin, constipation, a feeling of being too cold, or frequent menstrual periods. Hypothyroidism is commonly caused by Hashimoto's disease, a condition in which the immune system attacks the thyroid gland. Insufficient thyroid hormone causes the cells in your body to slow down their processes. An overactive thyroid (hyperthyroidism) causes your body to speed up resulting in symptoms such as weight loss, rapid heart rate, nervousness, diarrhea, a feeling of being too hot, or irregular menstrual periods.

A thyroid-stimulating hormone may also determine the cause of an under active thyroid gland (hypothyroidism). TSH levels can help determine whether hypothyroidism is due to a damaged thyroid gland or some other cause (such as a problem with the pituitary gland or the hypothalamus. TSH levels monitor treatment with thyroid replacement medications for people who have hypothyroidism as well as monitor thyroid gland function in people who are being treated for hyperthyroidism. This treatment may include antithyroid medications, surgery, or radiation therapy.

Hypertension/High Blood Pressure

Blood pressure is the force of blood pushing against blood vessel walls. The heart pumps blood into the arteries (blood vessels), which carry the blood throughout the body. High blood pressure, also called hypertension, is dangerous because it makes the heart work harder to pump blood to the body and it contributes to hardening of the arteries and the development of heart failure. People whose blood pressure is above the normal range should consult their doctor about methods for lowering it.

RANGES:

- ☑ *Normal:* Less than 120/80
- ☑ *Pre-hypertension:* 120-139/80-89
- ☑ *Stage 1 high:* 140-159/90-99
- ☑ *Stage 2 high:* 160 and above/100 and above

Possible Causes:

- ☑ Smoking
- ☑ Being overweight
- ☑ Stress
- ☑ Genetics/Family History
- ☑ Lack of physical activity
- ☑ Too much salt in the diet
- ☑ Too much alcohol consumption

Symptoms: There are usually no symptoms or signs of high blood pressure. The only way to know if you have high blood pressure is to have your blood pressure checked.

- ☑ Severe headache
- ☑ Fatigue or confusion
- ☑ Vision problems
- ☑ Chest pain
- ☑ Difficulty breathing
- ☑ Irregular heartbeat
- ☑ Blood in the urine

High blood pressure is a serious condition that can damage the heart and blood vessels, and can eventually lead to several other conditions, including: Stroke, Heart Attack, Heart Failure, Vision Problems, and Kidney Failure. Your health care provider can tell if you have high blood pressure by checking your blood pressure with a blood pressure cuff and stethoscope. High blood pressure is typically treated by making changes in your lifestyle, and with drug therapy. Lifestyle changes include losing weight, stopping smoking, eating a healthy diet, and getting enough exercise.

Arthritis

Arthritis is a general term that means inflammation in a joint. Joint inflammation is characterized by redness, warmth, swelling and pain within the joint. Rheumatoid arthritis is a type of chronic arthritis that typically occurs in joints on both sides of the body (such as hands, wrists or knees). This symmetry helps distinguish rheumatoid arthritis from other types of arthritis. In addition to affecting the joints, rheumatoid arthritis may occasionally affect the skin, eyes, lungs, heart, blood, or nerves.

Common Symptoms:

- ☑ Joint pain and swelling
- ☑ Stiffness, especially in the morning or after sitting for long periods
- ☑ Fatigue

Rheumatoid arthritis affects everyone differently. In most people, joint symptoms develop gradually over several years. But in some, rheumatoid arthritis may progress rapidly and yet other people may have rheumatoid arthritis for a limited period of time and then enter a period of remission.

Most people with rheumatoid arthritis have the rheumatoid-factor antibody in their blood. (**Rheumatoid Factors** are actually antibodies that bind other antibodies.) Rheumatoid factor may sometimes be present in people who do not have rheumatoid arthritis. Other diseases can also cause the rheumatoid factor to be produced in the blood. Therefore, the diagnosis of rheumatoid arthritis is based on a combination of the joint symptoms and appearance as well as laboratory information and not just the presence of the rheumatoid factor in the blood.

People with rheumatoid arthritis may have a mild anemia. Blood tests may also reveal an elevated erythrocyte sedimentation rate **(ESR)** or elevated C-reactive protein **(CRP)** levels, which are markers of inflammation. Some people with rheumatoid arthritis may also have a positive antinuclear antibody test **(ANA)**. This test is indicative of the fact that rheumatoid arthritis is an autoimmune disease. A more specific blood test for rheumatoid arthritis is the Citrulline antibody test **(CCP) Cyclic Citrullinated Peptide Antibody IgG**. This antibody when present implies a tendency towards a more aggressive form of rheumatoid arthritis.

The diagnosis of rheumatoid arthritis is based on a combination of factors, including:

- ☑ The specific location and symmetry of painful joints
- ☑ The presence of joint stiffness in the morning
- ☑ Presence of bumps and nodules under the skin (rheumatoid nodules).
- ☑ Results of radiological tests that suggest rheumatoid arthritis.
- ☑ Positive results of blood tests mentioned above.

How to Read Your Report

You receive two copies of your blood report. One report to keep for your own records, and another to share with your health care provider if you wish to do so. The report will have your personal information including Name, Age, Sex, Specimen Number, Date of Collection, and Date of Report.

The report can be simple to understand. On the left side you will notice the name of each individual test. To the right of that you will notice two columns, the green *in range* column and the red *out of range* column. Hopefully most of your scores will be in the *in range* column and any in the *out of range* column will stick out. Scores in the *out of range* column will have a letter next to it such as an "H" for High or an "L" for Low. On the right side you will see the range for each test. Use this to determine the extent of any *out of range* scores. Example:

Name of Test	In Range	Out of Range	Reference Range
Triglycerides	118		MG/DL <150
Cholesterol, Total		202 H	MG/DL <200
HDL Cholesterol	51		MG/DL > or = 50
LDL Cholesterol	127		MG/DL <100
Chol/HDLC Ratio	4.0		(Calc) <5.0

***If you have a score that is significantly out of range you should consult your health care provider immediately.**

Weight Management

Physical activity is important to improving your health and preventing serious illness.
Experts advise doing either Moderate Activity or Vigorous Activity to get and stay healthy.

- **Moderate Activity** for at least 30 minutes a day, 5 days a week or more. Moderate activity is equal to a brisk walk, cycling about 10-12 miles per hour, sailing, or shooting hoops. You notice your heart beating faster with this type of activity.
- **Vigorous Activity** for at least 20 minutes a day, 3 days a week or more. Vigorous activity is equal to jogging, cycling at least 12 mph, cross-country skiing, or playing a basketball game. You breathe rapidly and your heart beats much faster with this kind of activity.

Being active for 10 minutes several times a day counts towards the above recommendations.
You can choose to do one or both types of activity. Always ask your doctor before starting any fitness program.

Regular moderate-intensity physical activity reduces the risk of:

- Coronary Artery Disease
- High Blood Pressure
- Stroke
- Type 2 Diabetes
- Obesity
- Anxiety
- Depression
- Breast Cancer, Colon Cancer, and Cancers of the female reproductive system.

A healthy weight is the weight your body naturally settles into when you consistently eat a nutritious diet, are physically active, and balance the calories you eat with the physical activity you do.

Nutrition is an extremely important component of being healthy. Consistently eating a balanced diet is far better than dieting for quick weight loss and then returning to your previous eating habits.

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